secondary malignant neuroma is shown by the fact that only twenty-two cases are recorded in literature.

To these the author adds a twenty-third, of whose history the following is a synopsis:

The patient, a thin, dwarfish woman of twenty-eight, had had since childhood, a dorsal scoliosis, and did not menstruate until twenty-four years old. Over her body she had a diffuse brownish pigmentation, with numerous nevi-like spots, and on arms, breast, abdomen, and left leg fibromata of different sizes and consistencies, some pigmented, others not. In the spring of 1893 she experienced pain of a severe and burning character in the right foot, and on the right buttock there developed a swelling of great sensitiveness. Upon examining her in November, 1893, the author found here a very painful tumor of the size of a duck's egg. This was connected with the sciatic nerve. This he removed, having to cut out a piece of the nerve, and to join the ends by a procedure analogous to the tendon-splitting of Hueter and Czerny.

The patient made a good recovery, with gradual return of sensation and motor power. The tumor proved to be a fibrosarcoma arising from the endoneurium, and contained a few nerve fibers.

The patient soon commenced to feel pain and weakness in the right arm, and in February, 1895, a small tumor connected with the ulnar nerve was removed with good result. This proved also to be a fibrosarcoma.

Nine monts later, after the same set of symptoms two small beginning fibrosarcomata were removed from the left occipital nerve. The patient next developed severe pain in the left hypogastric region, the sensitiveness and tension of the abdominal muscles being so great that no satisfactory exploration of the abdomen could be made. After lasting for four months, during which time morphine was constantly necessary, for some unexplained reason the pain suddenly diminished, and the patient was able to get about again. The trouble still progressed, however, and in November, 1896, there were extirpated the following tumors:

Two on the head (plexiform neuroma), one on the thorax, two on the buttocks, two on the thigh, one in the radial region. All were connected with nerves. The case has continued to progress in the same way, more tumors constantly developing, though by the use of morphine in small doses, the patient keeps about, and does a little housework. Some of the latterly extirpated tumors have proved to be pure neurofibromata. The miscroscopical report is given in full, and the subject in its pathological aspect is discussed at length. ALLEN.

69. UEBER VERÄNDERUNGEN DER SPINALGANGLIENZELLEN UND IHRER CENTRALEN FORTSÄTZE NACH DURCHSCHNEIDUNG DER ZUGEHÖRIGEN PERIPHEREN NERVEN (Concerning Changes in the Cells of the Spinal Ganglia and their Central Processes after Division of the Peripheral Nerves). R. Cassirer (Deutsche Zeitschrift für Nervenheilkunde, 14, 1898, p. 150).

Cassirer removed several centimeters of the sciatic nerve in sixteen rabbits, near the sciatic foramen, and examined, at various periods following the operation, the spinal ganglia belonging to these nerves. He distinguishes four types of normal cells in the spinal ganglia of rabbits. He believes with v. Lenhossék that a pericellular space does not exist when the technique has been perfect. He was able to observe pathological changes in the cells of the ganglia as early as five days after the operation. After about fifteen days the

normal cells began to be more numerous than the pathological ones. The alterations he observed were enlargement of the Nissl bodies; peripheral and, later, complete chromatolysis; displacement of the nucleus; possibly diminution in the size of the nucleus; greater staining properties of the nucleus; and—when the degeneration was advanced—pale blue coloration of the protoplasm. He found also some degeneration of the posterior columns and posterior roots on the operated side, and in the region corresponding to the sciatic nerve. It may be stated, as a result of his experiments, that when the sciatic nerve in the rabbit is cut, many cells of the corresponding ganglia are altered, and most of these are later restored. The escape of certain cells, and the restoration of others, cannot be satisfactorily explained. While changes were found five days after the nerve was cut, degeneration of the posterior columns was not found until fifteen days after the operation; this would seem to indicate that the latter was the result of the former. The degeneration of the posterior columns was slight, and the spinal-ganglion cells which showed the highest degree of alteration were not numerous. Cassirer thinks the results of these experiments do not offer an explanation for the degeneration of tabes.
SPILLER.

70. EIN BEITRAG ZUR PATHOLOGISCHEN ANATOMIE DER EPILEPSIE (A Contribution to the Pathological Anatomy of Epilepsy). A. Alzheimer (Monatsschrift für Psychiatrie und Neurologie, vol. IV, 1898, p. 345).

Alzheimer describes two cases of epilepsy with dementia, in which he found degeneration of the medullated fibers of the cerebral cortex, especially of the tangential layer, proliferation of the glia, and destruction of ganglion cells. These changes were almost uniform throughout the cerebral cortex, but the vessels presented no important alteration. He believes from his investigations and those of others that cases of so-called genuine epilepsy exist, with characteristic pathological changes. In these cases there is macroscopically more or less sclerosis of the superficial cortical layer, and microscopically proliferation of the glia with a tendency to a normal arrangement, and considerable degeneration of nerve fibers and ganglion cells throughout the cortex. He believes that the nerve elements are primarily affected, and that the histological changes are sufficient to explain the dementia. Other cases of so-called genuine epilepsy exist without these characteristic changes, but the cases such as he describes, which he calls the Chaslin form of epilepsy, are not rare. It is probable that different diseases are included under what we now call epilepsy. The illustrations accompanying this paper are exceedingly interesting. SPILLER.

71. RECHERCHES SUR LES LÉSIONS DES CENTRES NERVEUX, CONSÉCUTIVES A L'HYPERTHERMIE EXPÉRIMENTALE ET A LA FIÈVRE (Studies of the Effects of Fever and Artificial Hyperthermia on the Nervous System). G. Marinesco (Revue neurologique, 7, 1899, p. 3).

Goldscheider and Flatau, Brasch, Moxter, Ewing and others have shown that, both in diseases attended with high temperatures, and in artificial raising of the temperature in animals, certain changes, similar in character, are present in the ganglion cells of the nervous system. In this present contribution, Marinesco comes to the conclusions that there are at least three stages in the development of complete chromatolysis, some of which he thinks have escaped other